

UPDATE REPORT - PREVIOUS
REPORT DATE 12/19/80

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

CON'TEVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

80

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

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PHONE: (912) 367-7851

LER No.: 50-366/1980-159, Revision 1
Licensee: Georgia Power Company
Facility: Edwin I. Hatch
Docket #: 50-366

Narrative Report
for LER 50-366/1980-159, Revision 1

On November 26, 1980, with the mode switch in the refuel position, normal surveillance was being performed on the 2C Emergency Diesel Generator per the "DIESEL GENERATOR MANUAL START TEST" procedure. During the test, excessive noise was observed coming from the diesel engine. The generator was removed from service, and as the diesel engine was being prepared for shutdown, the engine tripped and was declared inoperable. The redundant power supplies were proven operable per Tech. Spec. 3/4.8.1.2, action b.

This is a repetitive event, as last reported on Reportable Occurrence No. 50-366/1980-146. Although both of these events relate to the diesel generator failing the manual start test, the cause of failure in each of these events was of a different nature. Public health and safety were not affected by either of these incidents.

An investigation revealed that the cotter pins for the rod cap retaining nuts on the No. 10 and No. 11 cylinders were broken. This allowed the retaining nuts to back off, which permitted excessive clearance between the connecting rod bearings and the crankshaft. The excessive clearance on the connecting rod caused the No. 11 cylinder rod cap studs to break, allowing the connecting rod to separate from the crankshaft, resulting in engine failure. On January 26, 1981, all engine repairs and vendor "Break In Run" requirements were completed satisfactorily. The "18 MONTH DIESEL GENERATOR SURVEILLANCE TEST" and the "DIESEL GENERATOR MANUAL START" procedures were performed satisfactorily, thus returning 2C Diesel to normal operable status.

The use of cotter pins for locking the connecting rod caps retaining nuts in place is generic to the remaining diesels. An investigation of the connecting rods on the remaining diesels was conducted to assure a failure of this nature does not recur. During this inspection, no abnormalities were discovered.

On July 27, 1982, another failure of Diesel 2C initiated an investigation by the vendor engineers. This investigation concluded the cause of failure was inadequate lubrication. At this time, the vendor recommended increasing the Pre-lube time, thus allowing the engine components to become better lubricated before the Diesel is manually started. Operating procedures were revised to incorporate the new pre-lube time.

CLC

II

REPORT NUMBER 2-80-485

UNIT NUMBER

TITLE 2C Diesel Generator Tripped

MPL NUMBER 2R43-500K DISCOVERY DATE 11-26-80 TIME 0915

EVENT DATE 11-26-80 TIME 0915 REPORT DATE 11-26-80 TIME 0915

REACTOR POWER 0 MWT. GENERATOR OUTPUT 0 MW (gross)

MODE SWITCH POSITION: RUN (), STARTUP & HOT STANDBY (), SHUTDOWN (), REFUEL (✓)

CAUSE OF DEVIATION: PERSONNEL ERROR (), EXTERNAL CAUSE (), DESIGN, MANUFACTURING, CONSTRUCTION/INSTALLATION (), DEFECTIVE PROCEDURES (), COMPONENT FAILURE (✓), () OTHER

TECHNICAL SPECIFICATION REQUIREMENTS PERFORMED: N/A (), YES (✓)

EXPLAIN 3/4 8.1

DEVIATION REPORTED BY Frank Gorley SIGNATURE [Signature] Shift Foreman

DATE 11-26-80

REVIEWED BY [Signature] AND [Signature] Operations Supv. or Supv. Mgr. or Asst. Mgr. or SPEE

FRS has reviewed this deviation and determined that it is either reportable under a 24 hour/14 day, 30 day, special, or 100FR 2: report, or it is not reportable.

FURTHER REPORTING REQUIRED: YES (✓) NO ()

IF YES, GIVE APPLICABLE REPORT REQUIRED AND REPORT NO.

RO 2-80-159

IF NO, EXPLAIN

30 Day Report Due 12/11/80
Required By 3.6.9.1.B
Responsible RTN

FRS meeting no. 80-238
[Signature]
FRS SECRETARY

REVISIONS/REVISIONS/REVISIONS

- a. Activity in progress when event occurred: Operations Was Performing Normal Increased Surveillance On 2C Diesel Generator Per HNP-2-3801
- b. Describe circumstances leading to the event: Operator At Diesel Generator Observed Abnormal Noise. Control Room Operator Went To Investigate And Also Agreed That Noise Was Abnormal. Backed Generator Load To Minimum And Separated Generator From Line But Had Not Yet Tripped Diesel.
- c. Describe the EVENT (Must include reason for report - i.e. give the Technical Specification or license requirement which was not met): Shortly After Generator Was Removed From Service And Diesel Was Being Prepared To Be Shutdown, Diesel Started Making Loud Noise, Oil Started Coming Out Of Motor In Area Of Cylinders, And Diesel Motor Stopped.
- d. Describe any significant occurrence that took place as a result of the event: Control Room Activated Engine Shutdown Alarm, 2C Diesel Generator Shutdown And Engine Caught Fire
- e. Describe chain of events which occurred: Control Room Fire Team Was Dispatched To The Scene To Extinguish Fire & Fire Was Extinguished Immediately And Contained.

HNP-425

FIGURE 1 (CONT)

Edwin I. Hatch Nuclear Plant

File/Comm CCC



Georgia Power

the southern electric system

December 19, 1980
PM-80-1233

PLANT E. I. HATCH
Licensee Event Report
Docket No. 50-366

United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region II
Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

ATTENTION: Mr. James P. O'Reilly

Pursuant to Section 6.9.1.9.b of Hatch Unit II Technical Specifications.
please find attached Reportable Occurrence Report No. 50-366/1980-159.

[Signature]
M. Manry
Plant Manager

MM/RTN/mla

xc: J. H. Miller, Jr.
R. J. Kelly
W. A. Widner
J. T. Beckham, Jr.
C. L. Coggin
R. D. Baker
Control Room
File

~~8012290258~~

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

CON'T

REPORT
SOURCE

EVENT DATE

REPORT DATE 80

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ISSUE
LN

PHONE: 912-367-7781

NRC USE ONLY

LER No.: 50-366/1980-159
Licensee: Georgia Power Company
Facility Name: Edwin I. Hatch
Docket No.: 50-366

Narrative Report
for LER 50-366/1980-159.

On November 26, 1980, with the mode switch in the refuel position, normal surveillance was being performed on 2R43-S001C (2C Emergency Diesel Generator per HNP-2-3801, Diesel Generator Manual Start Test. During the test, excessive noise was observed coming from the diesel engine. The generator was removed from service, and as the diesel engine was being prepared for shutdown, the engine tripped and was declared inoperable. The redundant power supplies were proven operable per Tech Spec 3/4.8.1.2, action b.

This is a repetitive event, as last reported on Reportable Occurrence No. 50-366/1980-146. Although both of these events relate to the diesel generator failing the manual start test, the cause of failure in each of these events was of a different nature. Public health and safety was not affected by either of these incidents.

An investigation revealed that the cotter pins for the rod cap retaining nuts on the No. 10 and No. 11 cylinders were broken. This allowed the retaining nuts to back off, which permitted excessive clearance between the connecting rod bearings and the crank shaft. The excessive clearance on the connecting rod caused the No. 11 cylinder rod cap studs to break, allowing the connecting rod to separate from the crankshaft, resulting in engine failure.

The use of cotter pins for locking the connecting rod cap retaining nuts in place is generic to the remaining diesels. An investigation of the connecting rods on the remaining diesels was conducted to assure a failure of this nature does not re-occur. During this inspection, no abnormalities were discovered.

A follow-up report will be submitted when the diesel engine has been repaired and returned to service.